

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 11

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte WAYNE A. BONIN

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Appeal No. 2002-1339  
Application No. 09/148,239

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ON BRIEF

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Before KRASS, RUGGIERO, and DIXON, Administrative Patent Judges.  
KRASS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1-17 and 24.

The invention pertains to disc drives. In particular, the invention is directed to the use of microactuators used in disc drives. A low mass, comb-type microactuator is positioned between the slider and the transducer of the disc drive and this is said to provide relatively large travel with voltage in/displacement out control. The low mass of the microactuator

is said to enable the microactuator to operate at a resonant frequency many times higher than the servo frequency with springs that are relatively less stiff than those that would be utilized if the entire slider were actuated.

Representative independent claim 1 is reproduced as follows:

1. A disc drive data storage system, comprising:
  - a disc mounted to a motor for rotating the disc about an axis, the disc having a surface for storing data thereon;
  - an access arm having a proximal end and a distal end;
  - a slider connected to the distal end of the access arm and disposed adjacent the disc surface;
  - a comb microactuator mounted on the slider, the microactuator including a stator portion having fingers and a rotor portion having fingers interdigitated with the fingers on the stator portion; and
  - a transducer mounted on the rotor portion of the microactuator, such that actuation of the microactuator moves the transducer relative to the slider in a direction generally parallel to the fingers.

The examiner relies on the following references:

Tang et al. (Tang)	5,025,346	Jun. 18, 1991
Imamura et al. (Imamura), "Transverse Mode Electrostatic Microactuator For Mems-Based HDD Slider," <u>IEEE</u> , pp. 216-21 (1996).		

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Claims 2-4 and 15-17 stand rejected under 35 U.S.C. § 112, first paragraph, as being based on a nonenabling disclosure.

Claims 1-17 and 24 stand rejected under 35 U.S.C. § 103. As evidence of obviousness, the examiner cites Imamura with regard to claims 1-7, 9-13 and 15-17, adding Tang with regard to claims 8, 14 and 24.

A rejection of claims 1-17 and 24 under 35 U.S.C. § 112, second paragraph, has been withdrawn by the examiner (answer, page 10) and forms no part of this appeal.

Reference is made to the brief (paper no. 9) and answer (paper no. 10) for the respective positions of appellant and the examiner.

#### OPINION

With regard to the enablement rejection, the examiner contends that the language in the claims pertaining to the total mass of the rotor portion and transducer being "less than 100µg," "less than 50µg," and "less than 10µg" was not described in the specification in an enabling manner. In particular, the examiner says these recited ranges include values approaching zero and it is "unclear as to how one . . . can obtain a weight as small as that encompassed by claims 2-4 and 15-17" (answer, page 3). The examiner further states that "it is unclear at what

point the weight becomes non-enabled" (answer, page 3).

A specification disclosure which contains a teaching of the manner and process of making and using the invention in terms which correspond in scope to those used in describing and defining the subject matter sought to be patented must be taken as in compliance with the enabling requirement of the first paragraph of 35 U.S.C. § 112 unless there is reason to doubt the objective truth of the statements contained therein which must be relied on for enabling support. Assuming that sufficient reason for such doubt does exist, a rejection for failure to teach how to make and/or use will be proper on that basis; such a rejection can be overcome by suitable proofs indicating that the teaching contained in the specification is truly enabling, In re Marzucchi, 439 F.2d 220, 223, 169 USPQ 367, 369-70 (CCPA 1971); In re Sichert, 566 F.2d 1154, 1162, 196 USPQ 209, 215-16 (CCPA 1977).

In the instant case, the specification describes a rotor portion of the microactuator and the transducer having a "total mass of less than 100  $\mu$ g, preferably less than 50  $\mu$ g and ideally less than 10  $\mu$ g" (specification, pages 6-7) and contains a description of dimensions, etc. of microactuator parts which will achieve such total masses. This is not disputed by the examiner.

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Instead, the examiner questions enablement with regard to achieving total mass values "approaching zero." At page 9 of the answer, the examiner cites, in error, Section 2164.01(b) of the Manual of Patent Examining Procedure (MPEP). The correct cite of that Section states, "[a]s long as the specification discloses at least one method for making and using the claimed invention that bears a reasonable correlation to the entire scope of the claim, then the enablement requirement of U.S.C. 112 is satisfied." We endorse this section of the MPEP.

Applying the cited MPEP section to the claims at hand, it is clear that the instant specification is enabling for values, albeit not all values, of mass recited in the claims. The examiner does not deny that the specification is enabling for some values in the claimed range. It does not matter at what point the cited mass becomes non-enabling. The fact is, there is enablement for the subject matter, as claimed, and one cannot construe the claim language to encompass non-enabling embodiments and then complain that the claim runs afoul of 35 U.S.C. § 112, first paragraph, because the claim language appears to cover nonenabling, as well as enabling, embodiments.

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The rejection of claims 2-4 and 15-17 under 35 U.S.C. § 112, first paragraph, is reversed.

With regard to the rejection of claims 1-17 and 24 under 35 U.S.C. § 103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073-74, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teachings, suggestions or implications in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the examiner are an essential part of complying with the burden of presenting a prima

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facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If that burden is met, the burden then shifts to the appellant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. See Id.; In re Hedges, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d 1048, 1051-52, 189 USPQ 143, 146-47 (CCPA 1976). Only those arguments actually made by appellant have been considered in this decision. Arguments which appellant could have made but chose not to make in the brief have not been considered and are deemed to be waived (see 37 CFR § 1.192(a)).

Specifically with regard to instant claim 1, the examiner explains, at pages 4-5 of the answer, how Imamura is alleged to disclose the claimed disc drive, slider, microactuator having a stator portion having fingers, and a rotor portion upon which is mounted a transducer.

The examiner holds that although not shown in Imamura, it is established that sliders are incorporated into a hard disc drive system and that that would necessarily include a disc mounted to a motor, and an access arm.

The examiner admits that Imamura does not show that the fingers in the actuator of Figure 4(a) used in the hard disc drive move in a direction parallel to the fingers. But, the examiner states that Imamura shows another actuator, in Figure 4(b), wherein the fingers in the actuator move in a direction parallel to the fingers, and, since Figures 4(a) and (b) are the same, except that the springs are configured differently, it would have been obvious to reconfigure the springs in the microactuator of Figure 4(a) into the Figure 4(b) configuration to make the microactuator have its fingers moving in a direction parallel to the fingers, the motivation being the provision of a "constant force" and "smoother actuation" (answer, page 5).

It is our view that the examiner's proposed modification of Imamura's Figure 4(b) can only be reached through impermissible hindsight since Imamura does not suggest the proposed modification and treats the two actuator embodiments separately.

Moreover, we agree with appellant that one would not seek to modify Imamura in order to use a comb actuator, as depicted in



Figure 4(b), because Imamura is adamant about not using such an actuator since it provides a long stroke and generates a constant force along the stroke, "but the force is too weak for our application" (Imamura, page 218). Therefore, Imamura has considered the use of a "comb actuator," or a comb microactuator, and has decided against it because, as far as Imamura is concerned, such an actuator will not work with the hard disc drive of Imamura. Accordingly, the artisan would never have sought to modify Imamura in a manner so as to employ a comb microactuator, as claimed.

While the examiner is cognizant of this teaching by Imamura, the examiner argues that this only means that the force is too weak for hard disc drives (HDDs), "which does not necessary [sic, necessarily] mean for *all* kinds of disk drives. The claims encompass any type of disk drive" (answer, page 10). We disagree.

We view the instant invention as being directed to hard disc drives and construe the claimed "disc drive data storage system" as such. Moreover, while it is true that Imamura is interested in HDDs and states that the force produced by the comb actuator is too weak for this kind of drive, Imamura does not suggest that the comb actuator is suitable for other types of disc drive

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either. Accordingly, with no clear suggestion by Imamura as to the use of comb actuators and a very clear suggestion of its inapplicability to HDDs, we find it unlikely that the skilled artisan would have taken away from Imamura any suggestion to use a comb microactuator in a "disc drive data storage system," as claimed.

Accordingly, we will not sustain the rejection of claims 1-7, 9-13 and 15-17 under 35 U.S.C. § 103.

Since Tang is no help in supplying the deficiency of Imamura, i.e., a motivation to employ a comb microactuator in a disc drive data storage system, we also will not sustain the rejection of claims 8, 14 and 24 under 35 U.S.C. § 103.

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We have not sustained the rejection of claims 2-4 and 15-17 under 35 U.S.C. § 112, first paragraph, based on enablement, and we have not sustained the rejection of claims 1-17 and 24 under 35 U.S.C. § 103. Accordingly, the examiner's decision is reversed.

REVERSED

ERROL A. KRASS	)	
Administrative Patent Judge	)	
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	)	
	)	BOARD OF PATENT
JOSEPH F. RUGGIERO	)	APPEALS AND
Administrative Patent Judge	)	INTERFERENCES
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JOSEPH L. DIXON	)	
Administrative Patent Judge	)	

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